In the Claims

1. (Currently Amended) An agricultural bale accumulator comprising:

a hitch assembly adapted to mechanically couple a front side of the agricultural bale accumulator to a mating hitch assembly on a rear side of an agricultural baler to permit the agricultural bale accumulator to be towed by the agricultural baler;

a load bed adapted to receive, along a bale receiving axis, agricultural bales of crop material formed by and ejected from the agricultural baler, and adapted to accumulate the agricultural bales on the load bed; and

a controller adapted to generate a control signal to control an operation of the agricultural bale accumulator ~~responsive~~ in response to receiving a location signal, representative of a location of the agricultural bale accumulator in an agricultural field, to cause the agricultural bale accumulator to perform the operation in response to the location of the agricultural bale accumulator in an agricultural field.

2. (Currently Amended) An agricultural bale accumulator, according to claim 1, wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to determines a ~~number of~~ count of one or more of the agricultural bales ~~responsive~~ in response to receiving the location signal.

3. (Currently Amended) An agricultural bale accumulator, according to claim 1, wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to determines a size of one or more of the agricultural bales ~~responsive~~ in response to receiving the location signal.

4. (Currently Amended) An agricultural bale accumulator, according to claim 1, wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to determines a moisture content of one or more of the agricultural bales ~~responsive~~ in response to receiving the location signal.

5. (Currently Amended) An agricultural bale accumulator, according to claim 1, wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to determines a weight of one or more of the agricultural bales ~~responsive~~ in response to receiving the location signal.

6. (Currently Amended) An agricultural bale accumulator, according to claim 1, wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to

determines a location of ~~at least one~~ one or more of the agricultural bales discharged in the agricultural field from the load bed ~~responsive~~ in response to receiving the location signal.

7. (Currently Amended) An agricultural bale accumulator, according to claim 1, wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to determines a distance traveled in the agricultural field by the agricultural bale accumulator ~~responsive~~ in response to receiving the location signal.

8. (Currently Amended) An agricultural bale accumulator, according to claim 1, wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to determines a path traveled in the agricultural field by the agricultural bale accumulator ~~responsive~~ in response to receiving the location signal.

9. (Currently Amended) An agricultural bale accumulator, according to claim 1, wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to determines a contour of the agricultural field traveled by the agricultural bale accumulator ~~responsive~~ in response to receiving the location signal.

10. (Currently Amended) An agricultural bale accumulator, according to claim 1, wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to determines a size of the agricultural field traveled by the agricultural bale accumulator ~~responsive~~ in response to receiving the location signal.

11. (Previously Amended) An agricultural bale accumulator, according to claim 1, further comprising:

a field position locator adapted to provide the location signal.

12. (Previously Amended) An agricultural bale accumulator, according to claim 11, wherein the field position locator further comprises:

a global positioning system (GPS) receiver.

13. (Previously Amended) An agricultural bale accumulator, according to claim 11,

wherein the agricultural bale accumulator is adapted to be towed by the agricultural baler, and wherein the agricultural baler is adapted to be towed by a tractor,

wherein the field position locator is carried by the agricultural bale accumulator, or the agricultural baler, or the tractor.

14. (Currently Amended) An agricultural bale accumulator, according to claim 1,

wherein the controller is adapted to generate the control signal to cause the agricultural bale accumulator to control ~~of~~ the receipt and/or the accumulation of one or more of the agricultural bales on the load bed in response to receiving the location signal.

15. (Currently Amended) An agricultural bale accumulator, according to claim 14, further comprising:

a bale transfer module adapted to transfer at least one agricultural bale of the agricultural bales across the load bed along a bale transfer axis, horizontally transverse to the bale receiving axis, ~~responsive~~ in response to receiving a bale transfer control signal generated by the controller.

16. (Currently Amended) An agricultural bale accumulator, according to claim 14, further comprising:

a bale stacking module adapted to form at least one stack of agricultural bales, including at least two agricultural bales of the agricultural bales, along a bale stacking axis, vertically transverse to the bale receiving axis, ~~responsive~~ in response to receiving a bale stacking control signal generated by the controller.

17. (Currently Amended) An agricultural bale accumulator, according to claim 14, further comprising:

a bale arrangement control module adapted to arrange at least one agricultural bale of the agricultural bales on the load bed ~~responsive~~ in response to receiving a bale arrangement control signal generated by the controller.

18. (Currently Amended) An agricultural bale accumulator, according to claim 14, further comprising:

a bale stabilization module adapted to stabilize at least one agricultural bale of the agricultural bales accumulated on the load bed ~~responsive~~ in response to receiving a bale stabilization control signal generated by the controller.

19. (Currently Amended) An agricultural bale accumulator according to claim 14, further comprising:

a bale advancement module adapted to advance at least one agricultural bale of the agricultural bales along the bale receiving axis onto the load bed ~~responsive~~ in response to receiving a bale advancement control signal generated by the controller.

20. (Currently Amended) An agricultural bale accumulator, according to claim 1, further comprising:

a bale discharge module adapted to discharge at least one agricultural bale of a agricultural bales accumulated on the load bed to a ground surface of the agricultural field ~~responsive~~ in response to receiving a bale discharge control signal generated by the controller.

21. (Currently Amended) An agricultural bale accumulator, according to claim 20, further comprising:

a permissive bale discharge module adapted to discharge at least one agricultural bale of the agricultural bales accumulated on the load bed from a bale receiving portion of the load bed to the ground surface ~~responsive~~ in response to receiving a permissive bale discharge control signal generated by the controller.

22. (Currently Amended) An agricultural bale accumulator, according to claim 20, further comprising:

a selective bale discharge module adapted to selectively discharge at least one agricultural bale of the agricultural bales accumulated on the load bed from the load bed to the ground surface ~~responsive~~ in response to receiving a selective bale discharge control signal generated by the controller.

23. (Currently Amended) An agricultural bale accumulator, according to claim 20, further comprising:

a bale advancement module adapted to advance at least one agricultural bale of the agricultural bales along the bale receiving axis ~~responsive~~ in response to receiving a bale advancement control signal.

24. (Currently Amended) An agricultural bale accumulator, according to claim 20, further comprising:

a bale speed control discharge module adapted to control a rate of speed at which at least one agricultural bale of the agricultural bales is discharged from the load bed to the ground surface ~~responsive~~ in response to receiving a bale speed discharge control signal generated by the controller.

25. (Currently Amended) An agricultural bale accumulator, according to claim 1, further comprising:

a user interface module adapted to provide an interface between the agricultural bale accumulator and a user ~~responsive~~ in response to receiving a user interface control signal generated by the controller.

26. (Currently Amended) A method for operating an agricultural bale accumulator, having a hitch assembly adapted to permit the agricultural bale accumulator to be towed by the agricultural baler, comprising the steps of:

receiving on a load bed, along a bale receiving axis, agricultural bales of crop material formed by and ejected from the agricultural baler, and accumulating the agricultural bales on the load bed;

receiving a location signal representative of a location of the agricultural bale accumulator in an agricultural field;

generating a control signal in response to receiving the location signal; and

~~operating~~ controlling an operation of the agricultural bale accumulator ~~responsive~~ in response to receiving the ~~location~~ control signal to cause the agricultural bale accumulator to perform the operation in response to the location of the agricultural bale accumulator in an agricultural field.

27. (Previously Amended) A method for operating an agricultural bale accumulator, according to claim 26, wherein the step of receiving the location signal further comprises the steps of:

receiving a plurality of input signals transmitted by a plurality of global positioning satellites; and

processing the plurality of input signals to provide the location signal.

28. (Previously Amended) A method for operating an agricultural bale accumulator, according to claim 26, wherein the step of receiving the location signal further comprises the steps of:

receiving an initialization signal indicative of a starting location of the agricultural bale accumulator in the agricultural field;

receiving an input signal from a compass;

determining a distance traveled by the agricultural bale accumulator in the agricultural field; and

processing the initialization signal, the input signal from the compass, and the distance traveled by the agricultural bale accumulator in the agricultural field to determine the location of the agricultural bale accumulator in the field.

29. (Currently Amended) A method for operating an agricultural bale accumulator, according to claim 26, wherein the step of ~~operating~~ controlling the operation of the agricultural bale accumulator further comprises the step of:

receiving and/or accumulating one or more of the agricultural bales on the load bed in response to receiving the control signal.

30. (Currently Amended) A method for operating an agricultural bale accumulator, according to claim 26, wherein the step of ~~operating~~ controlling the operation of the agricultural bale accumulator further comprises the step of:

discharging at least one agricultural bale of the agricultural bales accumulated on the load bed to a ground surface of the agricultural field in response to receiving the control signal.

31. (Currently Amended) A method for operating an agricultural bale accumulator, according to claim 30, further comprising the steps of:

determining a present number of agricultural bales received and accumulated on the agricultural bale accumulator;

determining whether the present number of agricultural bales received and accumulated on the agricultural bale accumulator is equal to or less than a predetermined bale accumulating capacity of the agricultural bale accumulator;

when it is determined that the present number of agricultural bales received and accumulated on the agricultural bale accumulator is equal to the predetermined bale accumulating capacity of the agricultural bale accumulator, then perform the step of:

determining whether the agricultural bale accumulator is located in or has recently passed through at least one predetermined bale discharge zone located in the field ~~(1135) responsive~~ in response to the location of the agricultural bale accumulator in the field;

when it is determined that the agricultural bale accumulator is located in or has recently passed through the at least one predetermined bale discharge zone, then perform the step of:

discharging the present number of agricultural bales received and accumulated on the agricultural bale accumulator to the ground surface in or near the at least one predetermined bale discharge zone;

when it is determined that the agricultural bale accumulator is not located in or has not recently passed through the at least one predetermined bale discharge zone, then perform the steps of:

discharging some of the present number of agricultural bales received and accumulated on the agricultural bale accumulator to the ground surface prior to reaching a next predetermined bale discharge zone to be reached by the agricultural bale accumulator as the agricultural bale accumulator travels a remaining distance from a present location of the agricultural bale accumulator in the field to the next predetermined bale discharge zone ~~responsive~~ in response to the location of the agricultural bale accumulator in the accumulator field and a location of the next predetermined bale discharge zone; and

continuing with the step of receiving and accumulating the agricultural bales on the agricultural bale accumulator;

when it is determined that the present number of agricultural bales received and accumulated on the agricultural bale accumulator is less than the predetermined bale accumulating capacity of the agricultural bale accumulator, then perform the step of:

determining whether the agricultural bale accumulator is located in or has recently passed through the at least one predetermined bale discharge zone;

when it is determined that the agricultural bale accumulator is located in or has recently passed through the at least one predetermined bale discharge zone, then perform the step of:

discharging the present number of agricultural bales received and accumulated on the agricultural bale accumulator from the agricultural bale equipment to the ground surface in or near the at least one predetermined bale discharge zone;

when it is determined that the agricultural bale accumulator is not located in or has not recently passed through the at least one predetermined bale discharge zone, then continuing with the step of:

receiving and accumulating the agricultural bales on the agricultural bale accumulator.

32. (Currently Amended) A method for operating an agricultural bale accumulator, according to claim 31, further comprising the steps of:

determining a past distance traveled by the agricultural bale accumulator in the field while the present number of agricultural bales were received and accumulated on the agricultural bale accumulator; and

determining an average number of agricultural bales received and accumulated on the agricultural bale accumulator over the past distance traveled by the agricultural bale accumulator in the field ~~responsive~~ in response to the present number of bales received and accumulated on the agricultural bale accumulator and the past distance traveled by the agricultural bale accumulator in the agricultural field.

33. (Currently Amended) A method for operating agricultural bale accumulator, according to claim 32, wherein the step of discharging some of the present number of agricultural bales received and accumulated on the agricultural bale accumulator to the ground surface prior to reaching the next predetermined bale discharge zone further comprises the steps of:

determining the remaining distance between the present location of the agricultural bale accumulator in the field and the next predetermined bale discharge zone in the field to be reached by the agricultural bale accumulator ~~responsive~~ in response to the location of the agricultural bale accumulator in the field and the location of the next predetermined bale discharge zone in the field;

estimating a future number of bales to be received and accumulated on the agricultural bale equipment over the remaining distance between the present location of the agricultural bale accumulator in the field and the next predetermined bale discharge zone to be reached by the agricultural bale accumulator ~~responsive~~ in response to the average number of agricultural bales received and accumulated on the agricultural bale accumulator over the past distance traveled by the agricultural bale accumulator in the field and the remaining distance between the present location of the agricultural bale accumulator in the field and the next predetermined bale discharge zone; and

discharging the estimated future number of agricultural bales to be received and accumulated on the agricultural bale accumulator from the load bed to a ground surface prior to reaching the next predetermined bale discharge zone as the agricultural bale accumulator travels the remaining distance from the present location of the agricultural bale accumulator in the field to the next predetermined bale discharge zone.

34. (Currently Amended) A method for operating an agricultural bale accumulator, according to claim 31, further comprising the step of:

determining whether a future number of agricultural bales that the agricultural bale accumulator can receive and accumulate before the agricultural bale accumulator reaches the next predetermined bale discharge zone is greater than a remaining number of bales that the agricultural bale accumulator can receive and accumulate before reaching the predetermined bale accumulating capacity of the agricultural bale accumulator ~~responsive~~ in response to determining that the present number of bales received and accumulated on the agricultural bale accumulator is less than the predetermined bale accumulating capacity of the agricultural bale accumulator, but prior to the step of discharging the present number of bales received and accumulated on the agricultural bale accumulator from the agricultural bale accumulator to the ground surface in or near the at least one predetermined bale discharge zone.

35. (Previously Amended) A method for operating an agricultural bale accumulator, according to claim 34, wherein the step of determining whether the future number of agricultural bales that the agricultural bale accumulator can receive and accumulate before the agricultural bale accumulator reaches the next predetermined bale discharge zone is greater than the remaining number of agricultural bales that the agricultural bale accumulator can receive and accumulate before reaching the predetermined bale accumulating capacity of the agricultural bale accumulator further comprises the steps of:

subtracting the present number of agricultural bales received and accumulated on the agricultural bale accumulator from the predetermined bale accumulating capacity of the agricultural bale accumulator to determine the remaining number of agricultural bales that the agricultural bale

equipment can receive and accumulate before the predetermined bale accumulating capacity of the agricultural bale accumulator reaches its maximum limit;

determining a remaining distance between a present location of the agricultural bale accumulator in the field and the next predetermined bale discharge zone to be reached by the agricultural bale accumulator;

multiplying the average number of bales received and accumulated on the agricultural bale accumulator over the distance traveled by the agricultural bale accumulator in the field by the remaining distance between a present location of the agricultural bale accumulator in the field and the next predetermined bale discharge zone to be reached by the agricultural bale accumulator to determine the future number of bales that the agricultural bale accumulator can receive and accumulate before the agricultural bale accumulator reaches the next predetermined bale discharge zone;

when it is determined that the future number of agricultural bales that the agricultural bale accumulator can receive and accumulate before the agricultural bale accumulator reaches the next predetermined bale discharge zone is greater than a remaining number of agricultural bales that the agricultural bale accumulator can receive and accumulate before reaching the predetermined bale accumulating capacity of the agricultural bale accumulator, then perform the step of:

discharging the present number of agricultural bales received and accumulated on the agricultural bale accumulator from the agricultural bale accumulator to the ground surface in or near the at least one predetermined bale discharge zone;

when it is determined that the future number of bales that the agricultural bale accumulator can receive and accumulate before the agricultural bale accumulator reaches the next predetermined bale discharge zone is not greater than a remaining number of agricultural bales that the agricultural bale accumulator can receive and accumulate before reaching the predetermined bale accumulating capacity of the agricultural bale accumulator, then continuing to perform the step of:

receiving and accumulating the plurality of agricultural bales on the agricultural bale accumulator.

36-60 (Previously cancelled, without prejudice)